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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,879	07/20/2005	Paul Royston Harvey	PHNL030014US	1832

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595 MINER ROAD
CLEVELAND, OH 44143

EXAMINER

FETZNER, TIFFANY A

ART UNIT	PAPER NUMBER
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2859

MAIL DATE	DELIVERY MODE
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09/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,879

Applicant(s)

HARVEY, PAUL ROYSTON

Examiner

Tiffany A. Fetzner

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2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/20/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/20/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on **July 20th 2005** is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the **July 20th 2005 information disclosure statement**. The initialed and dated information disclosure statement (IDS) of **July 20th 2005** is attached to this office action.

Drawings

3. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete.

A) **The specification teaches and describes figures 1 through 11, [See page 2 line 24 through page 3 line 11, and page 5 line 1 through page 7 line 31], but applicant's drawings show figures 1a, 1b, 1c, 2a, 2b, 2c, fig. 3, fig. 4., figures 5a, 5b, and 5c. The examiner notes that there are 11 individual figures shown, but the numbering throughout the specification des not match the numbering of the figures. Proper matching and correspondence to what is described is needed.**

B) Also each figure shown must be referred to in the written specification. Because this error affects all figures either a replacement specification or replacement figures are needed, in conjunction with applicant ensuring that each newly identified figure is properly referenced, in the detailed as well as the brief description of the drawings. The references to figures 2a, 2b, 2c, 4, 5a, 5b, and 5c appear to be missing.

37 CFR 1.83(b) reads as follows:

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When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

A) The specification describes figures, which were not provided by applicant with the initial original filing of this application, or figures that have been misidentified by the wrong reference number, as noted in the objections to the drawings set forth above. Appropriate correction is required.

Claim objections

6. The term "**computer program product**" is objected to in **claim 7**, because it does not correspond to proper US format for computer claims setting forth a tangible, concrete and useful result." The proper terminology is "**computer readable medium**". Appropriate correction is required.

Claim Rejections - 35 USC § 102

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1-7** are rejected under **35 U.S.C. 102(e)** as being anticipated by **Zhu et al.**, US patent application publication 2004/0051529 A1 published March 18th 2004, with an effective US priority date of September 12th 2002.

9. With respect to **Claim 1**, **Zhu et al.**, teaches "A Magnetic resonance method for forming a dynamic image" (i.e. One of the multiple MR sub-images of the subject that are made while the subject is moving through the imaging portion of the MR magnet. [See paragraph [0023]]) "from a plurality of signals of an object moving relative to at least one RF receiving antenna" [See the multiple embodiments and configurations of paragraphs [0022] through [0045]], "whereas imaging is acquired by at least two adjacent fields of view" [See **Zhu et al.**, Figure 3], "which are reconstructed to an image over a region of interest which includes both FOVs" [See figures 1 through 4, paragraphs [0009] through [0045]] "wherein a sensitivity map of the at least one RF receiving antenna at each position relative to the object determined by each FOV is provided" [See paragraphs [0006], [0007], [0040] through [0045], and the abstract] "data from the object to be imaged is sampled for each FOV with a reduced number of phase encoding steps with respect to the full set thereof at a fixed position relative to the main magnetic field, and the image is reconstructed from the subsampled signals, which are weighted with the sensitivity factor of the RF receiving antenna at the respective imaging position" [See paragraphs [0041] through [0045], figure 4 paragraphs [0006], [0007], [0023] and figures 1-3 in general.]

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10. With respect to **Claim 2, Zhu et al.**, teaches “a single RF receiving antenna is used. [See paragraph [0039]]. The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

11. With respect to **Claim 3, Zhu et al.**, shows in figure 2 “a single RF transmitting antenna” (i.e. component 152 of figure 2 taught in paragraph [0023]) “is used, whereas the size of the transmitting antenna” (i.e. component 152 of figure 2) “is larger than the size of the receiving antenna” (i.e. the receiving antenna in figure 2 is at least one of receiver components 250, 251, and 252, and each of the receiver components 250, 251, and 252 is individually smaller than transmitting antenna 152 of figure 2. The same reasons for rejection, that apply to **claim 1** also apply to **claim 3** and need not be reiterated.

12. With respect to **Claim 4, Zhu et al.**, teaches “a single RF antenna is provided for transmitting and receiving RF signals.” [See the single transceiver module 150, and the embodiment of paragraph [0022]]. The same reasons for rejection, that apply to **claim 1** also apply to **claim 4** and need not be reiterated.

13. With respect to **Claim 5, Zhu et al.**, teaches and shows “an array of RF receiving antennae is used.[See figures 2, 3, 4; paragraphs [0021] through [0045] and the abstract.] The same reasons for rejection, that apply to **claim 1** also apply to **claim 5** and need not be reiterated.

14. With respect to **Claim 6, Zhu et al.**, teaches and shows “A magnetic resonance imaging apparatus for obtaining a dynamic image” (i.e. One of the multiple MR sub-images of the subject that are made while the subject is moving through the imaging portion of the MR magnet. [See paragraph [0023]]) “from a plurality of signals of an object moving relative to at least one RF receiving antenna”, [See the multiple embodiments and configurations of paragraphs [0022] through [0045]], “comprising: a patient table” (134) “for movement through the bore of a magnet at least one RF receiving antenna” [See figures 1, 2, 4], “means for acquiring an image over a region of interest which includes at least two adjacent fields-of-view” [See figures 2, 3, and 4], “means for providing a sensitivity map of the at least one RF receiving antenna at each position relative to the object determined by each FOV prior to imaging” [See figures 1

through 4, paragraphs [0006], [0007], [0040] through [0045], and the abstract] "means for sampling data from the object to be imaged for each FOV with a reduced number of phase encoding steps with respect to the full set thereof at a fixed position relative to the main magnetic field, and means for reconstructing the image from the subsampled signals, which are weighted with the sensitivity factor of the RF receiving antenna at the respective imaging position." [See paragraphs [0041] through [0045], figure 4 paragraphs [0006], [0007] [0023] and figures 1-3 in general.]

15. With respect to **Claim 7, Zhu et al.**, teaches and shows "A computer program product stored on a computer usable medium for forming a dynamic image with the magnetic resonance method, comprising a computer readable program means for causing the computer to control the execution of: moving a patient table for through the bore of a magnet sampling data from at least one RF receiving antenna, acquiring an image over a region of interest which includes at least two adjacent fields-of-view, providing a sensitivity map of the at least one RF receiving antenna at each position relative to the object determined by each FOV prior to imaging, sampling data from the object to be imaged for each FOV with a reduced number of phase encoding steps with respect to the full set thereof at a fixed position relative to the main magnetic field, and reconstructing the image from the subsampled signals, which are weighted with the sensitivity factor of the RF receiving antenna at the respective imaging position" for the same reasons as those already provided in the rejections of **claims 1, and 6** which need not be reiterated, as well as specifically the teachings of paragraph [0045] and paragraphs [0015] through [0020]] The same reasons for rejection, that apply to **claim 1, 6**, also apply to **claim 7** and need not be reiterated.

16. **Claims 1-7** are also rejected under **35 U.S.C. 102(e)** as being anticipated by **Zhu et al.**, US patent **7,009,396 B2** issued March 7th 2006, which is the corresponding issued patent of **Zhu et al.**, US patent application publication 2004/0051529 A1 published March 18th 2004, with an effective US priority date of September 12th 2002. Therefore, The same reasons for rejection, that apply to **claims 1-7** in the **Zhu et al.**, US patent application publication 2004/0051529 A1 also apply to **claims 1-7** with respect to the **Zhu et al.**, US patent **7,009,396 B2** and need not be reiterated.

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Conclusion

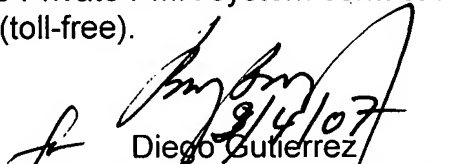
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(571) 273-8300**.

19. Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TAF
September 4, 2007



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